positioning a representation of a three dimensional component at a desired location relative to the three dimensional roof truss volume; and

sectioning the three dimensional roof truss volume at a point of interest to provide a two dimensional roof truss profile that includes a component profile if the three dimensional component extends through the point of interest.

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REMARKS

In the present Office Action, claims 1-26, all of which remain present in this application, were rejected. Applicant has amended independent claims 1, 10 and 19 for clarification and has concurrently filed herewith a request for a three month extension of time to respond to the present Office Action. In the present Office Action, the drawings were objected to for not including a legend designating Figs. 1A-1D as prior art; claims 1-26 were rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention; claims 1-26 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,740,341 (hereinafter Oota); and claims 1-26 were rejected under 35 U.S.C. §102(e) (sic? 35 U.S.C. §102(b)) as being anticipated by U.S. Patent No. 5,227,983 (hereinafter Cox). For the reasons further set forth below, Applicant respectfully submits that claims 1-26, as amended, are allowable.

With respect to the drawings, Applicant submits that Fig. 1A shows a roof truss volume that is sectioned at various locations to provide multiple roof truss profiles (see Figs. 1B-1D) according to various embodiments of the present invention. Thus, Applicant submits that Figs. 1A-1D do not depict prior art and, as such, should not be labeled as prior art.

With respect to the rejection of claims 1-26 under 35 U.S.C. §112, first paragraph, Applicant submits that claims 1, 10 and 19, as amended, are fully supported by the specification and enable one skilled in the art to make and/or use the invention, as claimed.

With respect to the rejection of claims 1-26 based on Oota, Applicant submits that Oota does not teach utilizing a two dimensional building structure profile (sectioned from a

representation of a three dimensional building structure volume) to determine where to position various structural and non-structural components within a building structure. While Oota discloses three dimensional component mapping based on a two dimensional logical connection information of plant components and three dimensional arrangement space information, as well as sectioning a building, the sectioning is directed to dividing a building with reference planes such that component arrangement and routing can be performed individually for each section (see col. 15, lns. 52-57). As stated above, this does not teach utilizing a two dimensional building structure profile, sectioned from a representation of a three dimensional building structure volume, to determine where to position various structural and non-structural components within a building structure.

With reference to Applicant's specification, Fig. 1A shows a representation of a three dimensional building structure volume, i.e., a three dimensional roof truss volume, that is sectioned at multiple points of interest. Applicant's Figs. 1B-1D, depict two dimensional building structure profiles, sectioned from the roof truss volume of Fig. 1A, at various points of interest. These two dimensional building structure profiles allow for the consideration of the positioning of various structural and non-structural components for a building structure.

With respect to the rejection of claims 1-26 based on Cox, Applicant submits that Cox is merely directed to a technique for designing a distribution system for a building that divides a building into sections, e.g., floors and rooms (see col. 4, lns. 13-22), with components, e.g., pipes, then being routed to avoid structural members for each of the sections. Further, Applicant notes that Cox is not directed to volume modeling of a building structure. In sum, Applicant submits that Cox does not teach utilizing a two dimensional building structure profile, sectioned from a representation of a three dimensional building structure volume, to determine where to position various structural and non-structural components within a building structure.

Applicant respectfully submits that this reply is fully responsive to the above-referenced Office Action. No new matter has been added with the amendments to the claims. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The first page of the marked-up version is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE," with added text underlined and deleted text in [brackets].

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CONCLUSION

For all of the foregoing reasons, Applicant respectfully submits that claims 1-26 are allowable. If the Examiner has any questions or comments with respect to this reply, the Examiner is invited to contact the undersigned at 616-949-9610.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 1, 10 and 19 have been amended as follows:

1. (Amended) A method of volume detailing a building structure that allows for the consideration of the positioning of various structural and non-structural components, comprising the steps of:

providing a representation of a three dimensional building structure volume, wherein the three dimensional building structure volume models a building structure;

positioning a representation of a three dimensional component at a desired location [in] relative to the three dimensional building structure volume; and

sectioning the three dimensional building structure volume at a point of interest to provide a two dimensional building structure profile that includes a component profile if the three dimensional component extends through the point of interest.

10. (Amended) A building structure volume detailing system for volume detailing a building structure that allows for the positioning of various structural and non-structural components, comprising:

a processor;

a memory subsystem coupled to the processor, the memory subsystem storing information;

an input device coupled to the processor, the input device receiving input from a user; and

volume detailing code for causing the processor to perform the steps of:

providing a representation of a three dimensional building structure volume, wherein the three dimensional building structure volume models a building structure;

positioning a representation of a three dimensional component at a desired location [in] relative to the three dimensional building structure volume; and

sectioning the three dimensional building structure volume at a point of interest to provide a two dimensional building structure profile that includes a component profile if the

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three dimensional component extends through the point of interest.

19. (Amended) A roof truss volume detailing system for volume detailing a system of roof trusses that allows for the consideration of the positioning of various structural and non-structural components, comprising:

a processor;

a memory subsystem coupled to the processor, the memory subsystem storing information;

an input device coupled to the processor, the input device receiving input from a user; and

volume detailing code for causing the processor to perform the steps of:

providing a representation of a three dimensional roof truss volume, wherein the three dimensional roof truss volume models a system of roof trusses;

positioning a representation of a three dimensional component at a desired location [in] relative to the three dimensional roof truss volume; and

sectioning the three dimensional roof truss volume at a point of interest to provide a two dimensional roof truss profile that includes a component profile if the three dimensional component extends through the point of interest.